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RAW SEQUENCE LISTING

DATE: 11/26/2002

PATENT APPLICATION: US/10/067,122B

TIME: 13:56:38

Input Set : A:\iu-0008.ST25.txt

Output Set: N:\CRF4\11262002\J067122B.raw

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3 <110> APPLICANT: Kwon, Byoung S
5 <120> TITLE OF INVENTION: Antibody for 4-lBB
7 <130> FILE REFERENCE: 740.009US2 (IU-0008)
9 <140> CURRENT APPLICATION NUMBER: US 10/067,122B
10 <141> CURRENT FILING DATE: 2002-02-04
12 <150> PRIOR APPLICATION NUMBER: US 08/012,269
13 <151> PRIOR FILING DATE: 1993-02-01
15 <150> PRIOR APPLICATION NUMBER: US 07/922,996
16 <151> PRIOR FILING DATE: 1992-07-30
18 <150> PRIOR APPLICATION NUMBER: US 07/267,577
19 <151> PRIOR FILING DATE: 1988-11-07
21 <160> NUMBER OF SEQ ID NOS: 13
23 <170> SOFTWARE: PatentIn version 3.1
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 2350
27 <212> TYPE: DNA
28 <213> ORGANISM: Mus musculus
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31 <221> NAME/KEY: misc feature
32 <222> LOCATION: (1253)..(1255)
33 <223> OTHER INFORMATION: n=a, c, g, or t
36 <400> SEQUENCE: 1
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39 ctacaccagg aaaaggacac attcgacaac aggaaaggag cctgtcacag aaaaccacag      120
41 tgtcctgtgc atgtgacatt tcgccatggg aaacaactgt tacaacgtgg tggtcattgt      180
43 gctgctgcta gtgggctgtg agaaggtggg agccgtgcag aactcctgtg ataactgtca      240
45 gcctggtact ttctgcagaa aatacaatcc agtctgcaag agctgccctc caagtacctt      300
47 ctccagcata ggtggacagc cgaactgtaa catctgcaga gtgtgtgcag gctatttcag      360
49 gttcaagaag ttttgctcct ctaccacaa cgcggagtgt gagtgcattg aaggattcca      420
51 ttgcttgggg ccacagtgcg ccagatgtga aaaggactgc aggcctggcc aggagctaac      480
53 gaagcagggg tgcaaaacct gtagcttggg aacattttaa gaccagaacg gtactggcgt      540
55 ctgtcgaccc tggacgaact gctctctaga cggaaggctc gtgcttaaga ccgggaccac      600
57 ggagaaggac gtggtgtgtg gacccccctgt ggtgagcttc tctcccagta ccaccatttc      660
59 tgtgactcca gagggaggac caggagggca ctccctgcag gtccttacct tgttccctggc      720
61 gctgacatcg gctttgctgc tggccctgat ctccattact ctccctgttct ctgtgtctca      780
63 atggatcagg aaaaaattcc cccacatatt caagcaacca tttaagaaga ccactggagc      840
65 agctcaagag gaagatgctt gtagctgccc atgtccacag gaagaagaag gaggaggagg      900
67 aggctatgag ctgtgatgta ctatcctagg agatgtgtgg gccgaaaccg agaagcacta      960
69 ggaccccacc atcctgtgga acagcacaag caaccccacc accctgttct tacacatcat      1020
71 cctagatgat gtgtgggcgc gcacctcatc caagtctctt ctaacgctaa catattgttc      1080
73 tttaaccttt tttaaatcttt ttttaaattt aaattttatg tgtgtgagtg ttttgccctgc      1140
75 ctgtatgcac acgtgtgtgt gtgtgtgtgt gtgacactcc tgatgcctga ggaggtcaga      1200
W--> 77 agagaaaggg ttggttccat aagaactgga gttatggatg gctgtgagcc ggnnngatag      1260

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79 gtcgggacgg agacctgtct tcttatttta acgtgactgt ataataaaaa aaaaatgata 1320
81 tttcggaat ttagagatt ctctgacac cttctagtt aatgatctaa gaggaattgt 1380
83 tgatacgtag tatactgtat atgtgtatgt atatgtatat gtatatataa gactctttta 1440
85 ctgtcaaagt caacctagag tgtctgggta ccaggccaat tttattggac attttacgtc 1500
87 acacacacac acacacacac acacacacgt ttatactacg tactgttatc ggtattctac 1560
89 gtcataataat gggatagggg aaaaggaaac caaagagtga gtgatattat tgtggagggtg 1620
91 acagactacc ctttctgggt acgtagggac agacctcctt cggactgtct aaaactcccc 1680
93 ttagaagtct cgtcaagttc ccggacgaag aggacagagg agacacagtc cgaaaagtta 1740
95 tttttccggc aaatcctttc cctgtttcgt gacactccac cccttgtgga cacttgagtg 1800
97 tcatccttgc gccggaaggt caggtgggtac ccgtctgtag gggcggggag acagagccgc 1860
99 gggggagcta cgagaatcga ctcacagggc gcccggggct tcgcaaataa aactttttta 1920
101 atctcacaag tttcgtccgg gtcggcgga cctatggcgt cgatccttat taccttatcc 1980
103 tggcgccaag ataaaaaac caaaagcctt gactccggta ctaattctcc ctgccggccc 2040
105 ccgtaagcat aacgcggcga tctccacttt aagaacctgg ccgcgttctg cctgggtctcg 2100
107 ctttcgtaaa cggttcttac aaaagtaatt agttcttgct ttcagcctcc aagcttctgc 2160
109 tagtctatgg cagcatcaag gctgggtatt gctacggctg accgctacgc cgccgcaata 2220
111 aggggtactgg gcggcccgtc gaaggccctt tggtttcaga aaccaaggc cccctcata 2280
113 ccaacgtttc gactttgatt cttgccggta cgtgggtggtg ggtgccttag ctctttctcg 2340
115 atagttagac 2350
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119 <211> LENGTH: 256
120 <212> TYPE: PRT
121 <213> ORGANISM: Mus musculus
123 <400> SEQUENCE: 2
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126 1 5 10 15
129 Gly Cys Glu Lys Val Gly Ala Val Gln Asn Ser Cys Asp Asn Cys Gln
130 20 25 30
133 Pro Gly Thr Phe Cys Arg Lys Tyr Asn Pro Val Cys Lys Ser Cys Pro
134 35 40 45
137 Pro Ser Thr Phe Ser Ser Ile Gly Gly Gln Pro Asn Cys Asn Ile Cys
138 50 55 60
141 Arg Val Cys Ala Gly Tyr Phe Arg Phe Lys Lys Phe Cys Ser Ser Thr
142 65 70 75 80
145 His Asn Ala Glu Cys Glu Cys Ile Glu Gly Phe His Cys Leu Gly Pro
146 85 90 95
149 Gln Cys Thr Arg Cys Glu Lys Asp Cys Arg Pro Gly Gln Glu Leu Thr
150 100 105 110
153 Lys Gln Gly Cys Lys Thr Cys Ser Leu Gly Thr Phe Asn Asp Gln Asn
154 115 120 125
157 Gly Thr Gly Val Cys Arg Pro Trp Thr Asn Cys Ser Leu Asp Gly Arg
158 130 135 140
161 Ser Val Leu Lys Thr Gly Thr Thr Glu Lys Asp Val Val Cys Gly Pro
162 145 150 155 160
165 Pro Val Val Ser Phe Ser Pro Ser Thr Thr Ile Ser Val Thr Pro Glu
166 165 170 175
169 Gly Gly Pro Gly His Ser Leu Gln Val Leu Thr Leu Phe Leu Ala
170 180 185 190
173 Leu Thr Ser Ala Leu Leu Leu Ala Leu Ile Phe Ile Thr Leu Leu Phe

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174          195          200          205
177 Ser Val Leu Lys Trp Ile Arg Lys Lys Phe Pro His Ile Phe Lys Gln
178          210          215          220
181 Pro Phe Lys Lys Thr Thr Gly Ala Ala Gln Glu Glu Asp Ala Cys Ser
182 225          230          235          240
185 Cys Arg Cys Pro Gln Glu Glu Glu Gly Gly Gly Gly Tyr Glu Leu
186          245          250          255

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189 <210> SEQ ID NO: 3

190 <211> LENGTH: 24

191 <212> TYPE: PRT

192 <213> ORGANISM: Mus musculus

194 <400> SEQUENCE: 3

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197 1 5 10 15

200 Thr His Asn Ala Glu Cys Glu Cys

201 20

204 <210> SEQ ID NO: 4

205 <211> LENGTH: 22

206 <212> TYPE: PRT

207 <213> ORGANISM: Drosophila

209 <400> SEQUENCE: 4

211 Cys Pro Val Cys Phe Asp Tyr Val Ile Leu Gln Cys Ser Ser Gly His

212 1 5 10 15

215 Leu Val Cys Val Ser Cys

216 20

219 <210> SEQ ID NO: 5

220 <211> LENGTH: 26

221 <212> TYPE: PRT

222 <213> ORGANISM: Dictyostelium

224 <400> SEQUENCE: 5

226 Cys Pro Ile Cys Phe Glu Phe Ile Tyr Lys Lys Gln Ile Tyr Gln Cys

227 1 5 10 15

230 Lys Ser Gly His His Ala Cys Lys Glu Cys

231 20 25

234 <210> SEQ ID NO: 6

235 <211> LENGTH: 6

236 <212> TYPE: PRT

237 <213> ORGANISM: Mus musculus

239 <220> FEATURE:

240 <221> NAME/KEY: MISC_FEATURE

241 <222> LOCATION: (5)..(5)

242 <223> OTHER INFORMATION: X=any amino acid

245 <400> SEQUENCE: 6

W--> 247 Val Gln Asn Ser Xaa Asp

248 1 5

251 <210> SEQ ID NO: 7

252 <211> LENGTH: 12

253 <212> TYPE: PRT

254 <213> ORGANISM: Artificial Sequence

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Input Set : A:\iu-0008.ST25.txt

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256 <220> FEATURE:
257 <223> OTHER INFORMATION: Synthetic
259 <400> SEQUENCE: 7
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262 1          5          10
265 <210> SEQ ID NO: 8
266 <211> LENGTH: 24
267 <212> TYPE: PRT
268 <213> ORGANISM: Artificial Sequence
270 <220> FEATURE:
271 <223> OTHER INFORMATION: Synthetic
273 <220> FEATURE:
274 <221> NAME/KEY: MISC_FEATURE
275 <222> LOCATION: (2)..(3)
276 <223> OTHER INFORMATION: X=any amino acid
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280 <221> NAME/KEY: MISC_FEATURE
281 <222> LOCATION: (5)..(13)
282 <223> OTHER INFORMATION: X=any amino acid
285 <220> FEATURE:
286 <221> NAME/KEY: MISC_FEATURE
287 <222> LOCATION: (15)..(17)
288 <223> OTHER INFORMATION: X=any amino acid
291 <220> FEATURE:
292 <221> NAME/KEY: MISC_FEATURE
293 <222> LOCATION: (19)..(21)
294 <223> OTHER INFORMATION: X=any amino acid
297 <220> FEATURE:
298 <221> NAME/KEY: MISC_FEATURE
299 <222> LOCATION: (23)..(23)
300 <223> OTHER INFORMATION: X=any amino acid
303 <400> SEQUENCE: 8
W--> 305 Cys Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Xaa
306 1          5          10          15
W--> 309 Xaa His Xaa Xaa Xaa Cys Xaa Cys
310          20
313 <210> SEQ ID NO: 9
314 <211> LENGTH: 4
315 <212> TYPE: PRT
316 <213> ORGANISM: Artificial Sequence
318 <220> FEATURE:
319 <223> OTHER INFORMATION: Synthetic
321 <400> SEQUENCE: 9
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324 1
327 <210> SEQ ID NO: 10
328 <211> LENGTH: 4
329 <212> TYPE: PRT
330 <213> ORGANISM: Artificial Sequence

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332 <220> FEATURE:
333 <223> OTHER INFORMATION: Synthetic
335 <220> FEATURE:
336 <221> NAME/KEY: MISC_FEATURE
337 <222> LOCATION: (2)..(2)
338 <223> OTHER INFORMATION: X=any amino acid
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W--> 343 Cys Xaa Cys Pro
344 1
347 <210> SEQ ID NO: 11
348 <211> LENGTH: 25
349 <212> TYPE: DNA
350 <213> ORGANISM: Artificial Sequence
352 <220> FEATURE:
353 <223> OTHER INFORMATION: Synthetic
355 <400> SEQUENCE: 11
356 acctcgaggt cctgtgcatg tgaca 25
359 <210> SEQ ID NO: 12
360 <211> LENGTH: 25
361 <212> TYPE: DNA
362 <213> ORGANISM: Artificial Sequence
364 <220> FEATURE:
365 <223> OTHER INFORMATION: Synthetic
367 <400> SEQUENCE: 12
368 atgaattctt actgcaggag tgccc 25
371 <210> SEQ ID NO: 13
372 <211> LENGTH: 11
373 <212> TYPE: PRT
374 <213> ORGANISM: Mus musculus
376 <400> SEQUENCE: 13
378 Cys Arg Pro Gly Gln Glu Leu Thr Lys Gln Gly
379 1 5 10

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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 11/26/2002
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; N Pos. 1253,1254,1255

Seq#:6; Xaa Pos. 5

Seq#:8; Xaa Pos. 2,3,5,6,7,8,9,10,11,12,13,15,16,17,19,20,21,23

Seq#:10; Xaa Pos. 2

VERIFICATION SUMMARY

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Input Set : A:\iu-0008.ST25.txt

Output Set: N:\CRF4\11262002\J067122B.raw

L:77 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:1200
L:247 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:305 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:309 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:16
L:343 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0